Examining the Relationship of Optimism and Emotion Regulation Strategies with General Health among Students of University of Sistan and Baluchestan

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Received 29 October 2014; accepted 19 February 2015; published 28 July 2015

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Abstract

Background and Objective: Individuals apply various emotion regulation strategies, some of which are adaptive and others are maladaptive affecting people’s general health. Moreover, individual life-orientation including favorable expectancies about future (optimism) is associated with health-related behaviors. The purpose of the present study was to investigate the relationship of optimism and emotion regulation strategies with general health of university students.

Methods: This was a correlational study. In this regard, 182 students of University of Sistan and Baluchestan (70 males and 112 females) were chosen. The statistical population of the present study consisted of all undergraduate students of the university of Sistan and Baluchestan in the second semester of the 2009-2010 academic year. Considering the nature of the current study, the correlational method was applied. Based on Krejcie and Morgan’s table, a sample of 200 subjects was selected from students majored at different fields including human sciences, basic sciences and technical-engineering through applying multi-stage random sampling method. Eighteen incomplete questionnaire forms were excluded. Finally, data obtained from 182 subjects (112 females, 70 males) were analyzed. The mean age was 21.1 year-old and standard deviation of the sample was 2.06. Samplings were assessed using the Revised Life-Orientation Test (LOT-R), Emotion Regulation Questionnaire (ERQ) and General Health-28 Questionnaire (GHQ-28). Data were analyzed using the Pearson correlation coefficient and regression analysis. Results: Findings showed that there was a significant positive relationship between optimism and general health (r = 0.22, p < 0.01). Among all research variables, i.e. optimism and emotion regulation strategies (cognitive reappraisal and expressive suppression), only optimism was able to predict 0.06 percent of variance of general health (p < 0.001).

Conclusion: Optimists have higher general health...
and consistent with other findings, optimism is associated with higher levels of applying coping strategies and lower levels of avoidance.

**Keywords**

Optimism, Emotion Regulation Strategies, General Health

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**1. Introduction**

Research literature in the area of health psychology indicates that researchers have recently paid a great attention to understand factors predicting physical and mental health. Optimism and emotion regulation strategies are among the factors that in recent decades have significantly attracted many researchers’ attention [1].

Optimism is an orientation to life in which individuals experience their daily life with an optimistic orientation, more positive way and expecting more positive results [2]. According to Sheer and Carver’s model, optimism refers to having positive expectation about future [3]. According to Srivastava et al., optimists are those who are cognitively oriented to positive and desired expectations [4].

Some researchers believe that optimism can be considered as an important predictor of adaptation. It is suggested that optimism is associated with welfare and health; in this regard, previously conducted studies show that optimism significantly predicts multiple aspects of health and welfare. Studies indicate that high scores on optimism are associated with life satisfaction and lower blood pressure, while lower scores are connected with depressive symptoms [2]. Segerstrom et al. (1998) indicate that the mediator role of optimism, even if slight, is remarkable considering the general health. According to them, high levels of optimism are positively correlated with better welfare in adversities and difficulties [5].

One of the good results of optimism and individual welfare is in the medical area. Several studies were conducted on individuals with heart arteries surgery, examining these individuals a month before their surgery and eight month after the surgery. Results indicated that optimist individuals had less anxiety before and after the surgery. Another study conducted on individuals with head and neck cancer entailed similar results [6].

In a follow-up study carried out on the recovery process of men who underwent biopsy, patients were divided into two groups including slow recovery and fast recovery. Results showed that individuals with slow recovery had significantly less optimism compared to those placed in the fast recovery group [7]. The relationship of optimism and the immune system has been also noticed. Results of a research, in this regard, show that optimists have higher T lymphocytes immune cells compared with pessimists in reply to stressors [5]-[8].

Optimism is also associated with individuals’ mental health. In a longitudinal study, results suggested that optimism could predict individuals’ mental health after ten years [9]. Results showed that optimism predicted mental health (obsessive-compulsive syndrome, depression, hostility), physical health (sleep disorders and tension) [10]. Research studies also indicate that optimist individuals have higher natural anti-cancer cell compared to pessimist individuals [11].

Among the factors linked with optimism and its relationship with general health are coping styles and emotion regulation when confronting with stressful events. Optimism, in addition to effective emotion regulation strategies, has positive results regarding mental and physical health, occupational and educational success [12]. Results of a previously conducted research show that optimist individuals use strategies to regulate their emotions that allow them to overcome difficulties. It is stated that such individuals apply emotion regulation strategies including mental imagination, effort, thought control, logical analysis and reappraisal [13].

Emotion regulation strategies have an important role in adaptation with stressful events [14]. Results demonstrate that individuals’ capacity in effective regulation of emotions positively influence psychological happiness, physical health and interpersonal relations [15]. Emotion regulation refers to actions with the purpose of change or adjustment of an emotional state which is a certain form of regulation itself [16].

emotion regulation strategies that are associated with these steps include cognitive reappraisal and expressive suppression [17].

Cognitive reappraisal is associated with emotion regulation strategies centered on outcome, i.e. change in thinking style in relation with an emotion recall event that occurs before the emergence of emotion, and expressive suppression is related to emotion regulation strategies centered on response, i.e. change in behavior response style in an potentially emotion recall event that occurs before and after the emergence of emotion [18] [19].

Findings of the previously conducted studies show that cognitive reappraisal emotion regulation strategy is associated with lower negative emotions experience or higher positive emotions experience [20]. Research results about emotion regulation strategies in the area of general health indicate that expressive suppression is related to symptoms of physiological excitation in the cardiovascular system, hypertension, asthma, and stomach ulcers [21]. Findings suggest that individuals with higher levels of cognitive reappraisal emotion regulation strategy demonstrate higher levels of environmental dominance, personal growth, self-acceptance, independence and positive relationships with others, while individuals with expressive suppression emotion regulation strategy show lower levels of positive relationships with others [15]. Generally, it is confirmed that individuals with expressive suppression emotion regulation strategy are more emotionally vulnerable, while individuals with cognitive reappraisal emotion regulation strategy have lower vulnerability and higher mental health [20].

In a review, results suggest that emotion regulation skills are one of the main mechanisms that cause optimism effects. Optimist scope with stressors with predetermined plans, while pessimists mostly use thoughts and measures centered on escaping from the reality [22]. Reviewing previously conducted studies suggest that few studies were carried out to investigate the relationship of optimism and emotion regulation strategies with mental health. One of the factors that may have a relationship with university students’ mental health is emotion regulation strategies. Any deficiencies in emotion regulation can make students vulnerable against psychological problems, including depression and anxiety, and this can affect their orientation to life including optimism or pessimism. Therefore, in the present study, the main objective was to examine the relationship of optimism and subscales of emotion regulation strategies with mental health, determining which one of these two variables, i.e. optimism and emotion regulation strategies, is a better predictor of general health. Based on the research findings and evidence available in the context of research variables following questions will be examined:

1) Is there any relationship between optimism and emotion regulation strategies and general health?
2) Do optimism and emotion regulation strategies significantly predict general health?

2. Materials and Methods

2.1. Population and Sample

The statistical population of the present study consisted of all undergraduate students of the university of Sistan and Baluchestan in the second semester of the 2009-2010 academic year. Considering the nature of the current study, the correlational method was applied. Based on Krejcie and Morgan’s table, a sample of 200 subjects was selected from students majored at different fields including human sciences, basic sciences and technical-engineering through applying multi-stage random sampling method. Eighteen incomplete questionnaire forms were excluded. Finally, data obtained from 182 subjects (112 females, 70 males) were analyzed. The mean age was 21.1 year-old and standard deviation of the sample was 2.06.

Since emotional issues are important in the early academic years and mental-emotional distress often occur in the age range of 18 - 24 year-old and any damage in general health in this age range has important consequences, it was attempted to select the sample from undergraduates. In terms of ethical considerations, all respondents were free to participate in the study. If they were not eager, they could refuse. Subjects were assured that all information will be kept confidential and merely used for research purposes. In order to respect the privacy of participants, their names were not recorded. If desired, participants could attend an individual counseling session after the study to become aware of the research results. To investigate and analyze the results for both questions, statistical indicators such as frequency, percentage, mean, standard deviation, coefficient of correlation and regression analysis were used.

2.2. Instruments

Instruments used in the research include:
A. Life Orientation Test-Revised (LOT-R): This questionnaire was designed by Sheer and Carver (2002). This scale contains 8 items representing the extent that individuals appraise their expectations about life outcomes. It includes four positive items and four negative items. Items 1, 3, 4, and 7 are positively scored, while items 2, 5, 6, and 8 are negatively scored. Sheer and Carver respectively reported its Cronbach alpha coefficient and test-retest reliability coefficient 0.76 and 0.79, on a four-week interval for a group of students. Hatchett and Park [23] implemented the test on 96 students and reported that its alpha coefficient was 0.88. The Cronbach alpha coefficient reported by Kioimaky et al. [2] and Chunk and Sana, conducted a study on 560 subjects, [3] was 0.65 and 0.78, respectively. In Iran, test-retest reliability of the test conducted on 27 pre-university students with a ten-day interval was 0.70 [11].

B. Emotion Regulation Questionnaire (ERQ): The questionnaire was developed by John and Gross (2003) to assess individual differences in normal application of two emotion regulation strategies. The questionnaire has 10 items with two subscales including cognitive reappraisal and expressive suppression. Responses are scored on a 7-point Likert scale from completely disagree [1] to completely agree [7]. Gross and John [18] has reported the Cronbach alpha of cognitive reappraisal and expressive suppression which was 0.75 and 0.97, respectively. The questionnaire is in line with constructs of Coping Styles Scale, Watson’s Positive and Negative Affection Schedule (PANAS), Beck and Zhong’s depression Inventory, and Reef’s Test [15]. To prepare the emotion regulation questionnaire, double translation was used. First, the questionnaire was translated into Persian by the researchers. Afterwards, it was revised by Persian language and literature professors, English language professors and two psychologists (colleagues). Then, the translated version was translated into English by an English language MA student. After comparing the translated version with the original version, mistakes were alleviated and the questionnaire was prepared. In this research, the reliability of this questionnaire was calculated using Cronbach alpha which was 0.80.

C. General Health Questionnaire (GHQ-28): Goldberg and Hiller’s 28-item general health questionnaire is the most known screening tool to evaluate non-psychotic mental disorders. The 28-item questionnaire was developed by Goldberg and Hiller [24] to screen mental disorders in general population. The form used in the present study includes four scales each having seven items measuring four categories of non-psychiatric disorders, including 1) somatic symptoms; 2) anxiety and sleep disorders; 3) social dysfunctioning; and 4) depression and suicidal tendencies. The reliability of the questionnaire was estimated by the Palahang, Nasr and Baraheni [24] as 0.91. In Yaghubi et al.’s [24] study, the test-retest reliability coefficient and Cronbach alpha value were estimated 0.81. Shokri et al. [25] reported the correlation between data from two questionnaires of GHQ and 90-SCL as 0.87. In Taghavi's [26] study, the reliability coefficients were estimated as follows: total questionnaire: 0.72, somatic symptoms: 0.60, anxiety and sleep disorders: 0.68, social dysfunctioning: 0.57 and depression: 0.58.

2.3. Statistical Analysis and Obtained Results

To examine the first question, the Pearson correlation was used. Table 1 represents correlation matrix between variables and subscales in the sample.

Correlation matrix between research variables presented in Table 1 indicates that there is a significant positive correlation between optimism and general health. Results show that these coefficients are significant at the 0.01 level (p < 0.01). This matrix also shows that there is not any significant relationship between emotion regulation strategies, i.e. cognitive reappraisal and expressive suppression, and general health. However, their correlation is negative. To determine the role of variables of optimism and emotion regulation strategies in explaining the variation of general health, predictor variables entered into the regression equation. The results are provided in Table 2 and Table 3.

Table 2 indicates that F value (2.731) is significant at the 0.001 level (p < 0.001). Therefore, general health can be predicted by the variables under study.

As Table 2 and Table 3 indicate, the F value is significant at the 0.001 level and 0.06 percent of the variation of general health can be predicted by optimism and emotion regulation strategies (r² = 0.06). Considering the significance of R², slight coefficients of variables were also examined. The coefficient of optimism (B = 1.65) with t statistic of 3.12 indicates that the variable predicts the variation of general health at the 99% confidence level. Coefficients of reappraisal (B = 0.03) and expressive suppression (B = −0.18) with t statistic of 0.85 and 0.25 respectively show that these variables cannot significantly predict the variation of students’ general health.
### Table 1. Correlation matrix between research variables.

<table>
<thead>
<tr>
<th>Variables</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optimism</td>
<td>8.26</td>
<td>2.19</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Reappraisal</td>
<td>29.77</td>
<td>8.41</td>
<td>-0.18</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suppression</td>
<td>14.51</td>
<td>7.16</td>
<td>-0.03</td>
<td>0.03</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>General Health</td>
<td>41.57</td>
<td>15.46</td>
<td>0.22**</td>
<td>-0.12</td>
<td>-0.08</td>
<td>1</td>
</tr>
</tbody>
</table>

*p < 0.01.

### Table 2. Summary of analysis of variance of optimism and emotion regulation strategies (reappraisal and suppression) on general health.

<table>
<thead>
<tr>
<th>Source Index</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>2517.287</td>
<td>4</td>
<td>629.322</td>
<td>2.731</td>
<td>0.001</td>
</tr>
<tr>
<td>Residual</td>
<td>977.40780</td>
<td>177</td>
<td>203.401</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < 0.001.

### Table 3. Multiple regression analysis between predictor variables of optimism and control strategies and general health.

<table>
<thead>
<tr>
<th>Criterion Variable</th>
<th>Predictor</th>
<th>R</th>
<th>R²</th>
<th>SE</th>
<th>B</th>
<th>B</th>
<th>T</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Health</td>
<td>Optimism</td>
<td>0.53</td>
<td>1.65</td>
<td>0.23</td>
<td>3.12</td>
<td>0.001</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reappraisal</td>
<td>0.241</td>
<td>0.06</td>
<td>0.14</td>
<td>0.03</td>
<td>0.01</td>
<td>0.19</td>
<td>0.85</td>
</tr>
<tr>
<td></td>
<td>Suppression</td>
<td>0.16</td>
<td>-0.18</td>
<td>-0.08</td>
<td>-1.15</td>
<td>0.25</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < 0.001

### 3. Discussions

The purpose of the current research was to examine the relationship of optimism and emotion regulation strategies with general health. Results of the first hypothesis confirmed the existence of a relationship between optimism and emotion regulation strategies and general health and indicated that only optimism was correlated with general health. Results revealed that among the predictor variables, i.e. optimism and emotion regulation strategies, optimism could significantly explain the variation of general health. This is consistent with the results of Segerstrom et al. [5], Alloy et al. [27], Fitzgerald [6], Vollrath [8], Chang and Sana [3], Hatchett [23], Shepperd et al. [28], Karademas [29]. Additionally, these findings are in line with Sepahvand et al. [30] that examined the relationship of optimistic attribution and stressful events with general health.

To justify these results, it can be explained that optimistic individuals, due to having self-confidence, insist on achieving their goals fighting against challenges. In optimists’ view, adversities and problems could be manipulated. On the other hand, research has indicated that optimism is associated with the construct of hope. According to Snyder [31], hope, as the rainbow of mind, has two parts. The first part relates to the individual’s perception of the ways that direct him/her to the goals (passage) and the second relates to the individual’s confidence level of being able to achieve his/her goals through applying those ways (agent). Results indicated that optimists have higher levels of hope, act significantly better in identifying appropriate goals and insist more on pursuing their goals compared to others [29]. Optimists are more successful in preparing cognitive coping resources and dependent resources that cause mental health promotion. It is also indicated that optimists slightly suppress their anger, have lower levels of depression, anxiety and suppression emotion regulation strategy [11].

Another finding of the current study was the absence of relationship between emotion regulation strategies, i.e. cognitive reappraisal and expressive suppression, with general health. In general, most studies show that there is a relationship between emotion regulation strategies and general health [32]. Symptoms of deficiency and insufficiency in emotion regulation is observed in more than half of the disorders of axis I and in all disorders of axis II in the fourth revised collection of Diagnostic and Statistical Manual of Mental Disorders (DSM-4) [33]. Some
studies demonstrate that successful emotion regulation ability is associated with a number of physical, social and physiological health consequences. On the contrary, it is assumed that insufficiency in emotion regulation is the underlying mechanism of mood and anxiety disorders [34]. Overall, the results show that individuals who use weak emotion regulation strategies are more vulnerable when confronting with emotion difficulties, compared to others. This is while individuals who use appropriate strategies, such as cognitive reappraisal emotion regulation strategy, are less vulnerable [35]. In a meta-analysis of emotion regulation strategies and mental pathology syndrome in four disorders including anxiety, depression, eating disorder and drug abuse, results revealed that there was a significant relationship between the variables [36]. The results of the present study are not consistent with the results mentioned above. To explain these results, it can be noted that results about emotion regulation strategies could be affected by cultural issues. For example, studies indicated that Asian and Asian American are more pessimistic compared to their European American counterparts [3]. Some research studies indicate that cultural groups are different in actions and frequency of expressive suppression and the degree of negative emotions. It seems that research studies conducted in the Western countries on expressive suppression of emotions had hardly discussed cultural norms and values. For example, unlike the West culture that considers expressive suppression associated with negative symptoms, in Asian cultures, it may be associated with lower levels of negative symptoms. It seems that in Asian cultures, in a wide variety of conditions, expressive suppression is also supported, while in European cultures self-support functions are more emphasized [37].

Emotion expression patterns in Iran, according to Biman [38], are based on external demonstration and internal demonstration including compliment and sulk. Accordingly, it is argued that emotion regulation strategies in Iran are based on displacement, resonance, and demission. It is recommended that future articles focus on internal emotion regulation strategies. Regarding demonstration or expression of emotions, in the West culture what is considered as positive and lack of it is regarded as maladaptation may not receive equal maladaptation in other cultures. It seems that it is not essential to consider all psychological variables between two cultures to be different or similar. The issue of context and in general, culture and its roles, as native variables, shall be regarded in future research studies. Meanwhile we obtained the ethnic committee approval and informed consent via Sistan and Baluchestan University ( Zahedan, Iran).

The limitations of the present study were questionnaire limitations, lack of research background on generalization problems. Thus, researchers recommend to conduct similar research studies on different statistical populations and to apply causal-comparative methods to find possible relationships between variables such as organizational culture, and organizational performance or organizational climate and the like.

4. Conclusions
Mental health is dreamt by all nations and health psychology has a duty to examine general health as much as possible and spot factors that damage it. Mental health is defined as the establishment of mind for working coordinately, happily and effectively in adversities, flexibility and ability to retrieve balance. One of the factors that can significantly contribute to general health is life-orientation with explanatory optimistic styles. This type of orientation influences mental health, physical health and psychological compatibility. On the other hand, this type of orientation is a type of coping style. Three components can shape the concept of optimism: attention to positive feature of life; positive interpretation of events and positive expectation toward the future.

Optimism is associated with life satisfaction, since there is a sense of mental welfare in satisfaction of life. This sense has three components: positive affection, absence of negative affection and life satisfaction. These factors can also influence compatibility and general health. Of the signs of mental health is enjoyment of internal feature of empowerment or internal power resources. Enjoyment of these internal resources enables the individual to continue his/her adaptive growth and maintain his/her mental health in spite of horrible conditions and adversities. It seems that optimism, as a natural personality trait, is effective in this regard. Optimism is recommended to be taught as an explanatory style or effective.

Acknowledgements
All dear students who cooperated in the present study are sincerely appreciated.

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